



Technical Data Sheet:

UP-120

Product Name and Identification:

- Product Name: **UP-120**
- Chemical name: **Orthophthalic Unsaturated Polyester Resin**

Product Description:

UP-120 is a high-quality unsaturated polyester resin based on phthalic acid, specially designed for exceptional mechanical strength and durability. It is a versatile resin suitable for manufacturing various glass fiber reinforced plastics (GFRP) such as boats and kayaks, as well as household items, including chairs, tables, tanks, and bathroom fixtures. With excellent mechanical strength and good durability, products made with UP-120 are highly resilient and long-lasting. This resin is a popular choice in creating concrete molds for construction applications.

Physical and Chemical Properties:

1. **Viscosity:** 500-600 mPa.s
2. **Percent Solids:** 62-65 %
3. **Density at 20 °C:** 1.05-1.13 g/cm³
4. **Acid Value (Solids):** <20 mg KOH/g
5. **Color (gardener):** <2
6. **Gel Time:** 5-10 minute
7. **Curing time:** 10-15 minute
8. **Peak Temperature:** <200 °C

Technical Performance:

Parameter	Result	Units	Test Method
Hardness (Barcol):	30 - 45	-	ASTM D2583
Tensile Strength:	60 - 70	Mpa	ISO 527-2
Elongation at Break:	2 - 4	%	ISO 527-2
Flexural Strength:	90 - 110	Mpa	ISO 178
Flexural Modulus:	2500 - 3000	Mpa	ISO 178
Heat Distortion Temperature:	60 - 70	°C	ISO 75-2
Water Absorption, 24 hrs.:	≤ 0.30	%	ISO 621958

Application and Use:

Prefabricated Pools

Tanks

Cooling Towers

Sanitary parts

Curing Conditions: At a temperature of 25°C for every 100 grams of resin adding 1.44 grams (1% concentration) of cobalt accelerator and 2.2 grams of hardener (MEKP).

Packaging and Shelf Life:

Packaging Options: UP-120 is conveniently packaged in robust 200 kg metal barrels.

Shelf Life: Under optimal storage conditions, UP-120 exhibits a shelf life of 6 months.

